



**CGIAR Research Program on
Climate Change, Agriculture and Food Security (CCAFS)**

**CCAFS¹ Baseline Household Level Survey –
Manual for Survey Sites**

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¹ For more information on CCAFS, go to: www.ccafs.cgiar.org

Climate Change, Agriculture and Food Security (CCAFS) Baseline Household Survey – Training Manual for Field Supervisors

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Introduction

This baseline survey aims to gather baseline information at the household-level about some **basic indicators** of welfare, information sources, livelihood/agriculture/natural resource management strategies, needs and uses of climate and agricultural-related information and current risk management, mitigation and adaptation practices. The objective is to capture some of the diversity in the landscape, across communities and households. We are aiming for sufficient precision in some of these indicators to capture changes that occur. The same survey will be carried out in very diverse locations and many countries, initially in East Africa, West Africa and the Indo-Gangetic Plains, thus it is not intended to go into depth and explore complex relationships and research questions; the intention is that these will be explored in further research in the same locations and through the use of secondary data.

The various components of the survey include very limited information on household size, type and education levels; household assets; sources of livelihood; natural resources access and management; adaptation strategies relating to crops, livestock, aquaculture, agroforestry, and land management; food security and risk; information and knowledge; and social networks.

The plan is to revisit these households after roughly 5 years, and ideally again in 10 years, to monitor what changes have occurred since the baseline survey was carried out. The goal is not to attribute these changes to the program, but to be able to assess what kinds of changes have occurred and whether these changes are helping households adapt to, and mitigate, climate change.

There are huge challenges in developing one instrument to be carried out in such a diverse range of cultures and environments. We are aiming to use the same questionnaire to the extent feasible, however, it is acknowledged that some questions may not be ideal in particular countries. Therefore, we are designing code sheets that may be adapted in particular countries. For the purposes of cross-site analyses, however, we urge that the questions are not changed, but that the varying responses are captured.

What we would like to see happen in 5-10 years after the baseline survey:

- The existence of some assets (or more assets) that some households did not originally own as evidence of enhanced well-being levels of these households, particularly assets that help them adapt to climate variability and change (e.g. water tanks).
- More widespread ownership of communication technologies that can be used to receive information helping them adapt; storage facilities and water harvesting/storage structures to enhance household food security.
- Evidence of increased diversification of livelihood sources and new sources of income (including by more vulnerable households), e.g. payments for ecosystem services (i.e. carbon, biodiversity); some evidence of a shift from subsistence to more market-oriented and food secure livelihood strategies.
- Evidence of crop, tree, livestock, aquaculture ‘substitution’ strategies and shifts in how, what and when people plant as adaptive strategies.
- Evidence of new, and more, soil, water, land management practices being

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implemented by more households.

- Evidence of improved food security situations in more, and in vulnerable, households.
- More households (including more vulnerable ones) accessing and using advanced information about weather, pests and diseases.
- More households (and women) engaged in groups that are collectively engaged in soil, water, land management/improvement activities.
- Improved access by more households to improved seeds, agricultural markets, credit for SLM activities and insurance.

Site selection

The following steps were taken in the site selection process:

1. Collation by consultant and CCAFS team of ongoing CGIAR research on climate change. CGIAR climate focal points and many individual principal investigators and CGIAR researchers were contacted to contribute to this database. This was done in collaboration with ICT-KM and the CG Map effort. These databases are available at: www.ccafs.cgiar.org and the ongoing research maps and initiative at: <http://ongoing-research.cgiar.org/>
2. CCAFS management team agreed upon criteria for selection of research sites (see Table 1).
3. Experts were engaged in each region and information as to potential sites that matched the criteria was collected, again through extensive consultation with CGIAR researchers and the principal regional and national organization partners (ASARECA, CORAF, ICAR, NCAR and BCAR). The regional facilitators in each region were also actively involved in this summary.
4. The Statistical Service's Centre at University of Reading was engaged to help develop the survey instruments and sampling frame that was agreed upon by the CCAFS team (described above).
5. Regional partnership-building (and scenarios development) workshops were held in Nairobi, Dakar, and New Delhi with sessions for participants to make suggestions and additions to the existing information on potential sites. Alignment with initial priority sites and partners (at least one per country) was sought. These workshop reports are available at: www.ccafs.cgiar.org
6. Visits were made by CCAFS researchers to the EA sites and further information on potential partners, existing data and projects was collected. Local partners in each country helped to choose the center of the 10x10km blocks within the area where the criteria were met.
7. In West Africa, the Institute du Sahel and ICRISAT were engaged to help further define the center of 30x30km blocks where the criteria were met (larger blocks

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were chosen here because of the lower population density and large distance between villages), and then randomly choose 7 villages within the blocks where the baseline surveys would be conducted.

8. It is important to note that partnership building and site selection is an ongoing process; *only initial sites* for a first round of baseline surveys have been selected to date, and additional sites and partners will be added as research priorities for CCAFS are co-developed with local and regional partners. A document summarizing initial site descriptions within 13 countries, with maps, will be made available at www.ccafs.cgiar.org.

Table 1. Site selection criteria

Criterion
A set of research locations representing key biophysical and agro-ecological gradients of the respective regions
Research locations that represent the key socio-economic and (where relevant) demographic gradients for the region, including extent of urbanization and gendered participation in different agricultural production systems
Research sites that lie along gradients of anticipated temperature and precipitation change
Research sites that lie along gradients of current and anticipated land use pressure
Research sites that represent different institutional (e.g. land tenure) arrangements. Similarly, gradients of significant difference in political and governance history
Sites that have significant but contrasting climate-related problems and opportunities for intervention
High potential sites, i.e. where impact is likely to be achieved: sites that build on ongoing CGIAR and national research infrastructure and research sites, and thus have good existing data on historical weather records; characterization of the natural resource base; detailed, longitudinal data on agricultural production; detailed, longitudinal socio-economic and demographic data at the household and village settlement/district level; data on the food system; and data on historical events and shocks experienced in relation to food security in the site
Governance and institutional capacity that favor the likelihood of scaling up and generating transferable results
Local champions knowledgeable about the site and available for/committed to collaborative work with CCAFS
A network of regional partners that will facilitate scaling up
Sites that have mitigation/carbon sequestration potential
Sites that are safe to work in, i.e. have good security for research teams
Research sites that are physically accessible and have the minimum logistical comforts for conducting research
Marginal sites with high vulnerability where impact will be difficult to achieve but where the need for innovative solutions to poverty and climate change vulnerability may be greatest

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Sampling framework and approach

Household and land surveys

The baseline study is designed to look at household and community level indicators and processes, and hence requires a study with both household and communities (villages) as study units.

Other components of the project require information about land (such as the extent of practices that impact on GHG emissions or soil C). These are best measured through a land-based measurement scheme, rather than household measurement. While it is sometime possible to convert between the two, it is not easy. For example, realistic assessment of the extent GHG mitigating practices can only be made by collecting data on all (or a properly defined statistical sample of) plots for each household, yet this is beyond the scope of the rapid baseline survey. For this reason we recommend detailed land-based assessments be made as a separate, but linked, study.

A standard protocol for land assessments related to degradation, carbon etc has been developed (<http://www.africasoils.net/>) and already used in one of CCAFS's initial East Africa sites, and it is increasingly being adopted by other projects. It therefore makes sense to link our sampling to it. The basic sampling unit used is a 10x10km block. Where land assessments of these blocks have already been made, we should locate household and village studies within them. Where land assessments have not been done, our site selection and baseline surveys should use a similar sampling unit, to allow overlay of a land assessment using these standard methods at a later date. This idea has been used to generate the sampling scheme below:

Sampling scheme for selecting blocks, villages and households for the baseline survey

The sampling requires 3 layers in a hierarchy: 10 x 10 km block (one per site), villages within a block (7) and households within each village (20). This scheme does not refer explicitly to administrative hierarchies.

Blocks

1. 'Site' is referred to extensively in all descriptions of the project but not clearly defined. By site we mean the district or set of adjacent districts that were selected based on the set of criteria above. CCAFS will engage in these sites with future research.
2. Within that larger site a 10 x 10 km block is selected for the baseline survey.
3. Locations of sites/blocks to include in each country should be based on the criteria described in the site selection section below.
4. The number of sites/blocks in a country must be determined by:
 - a. Conditions (biophysical or soc-economic) that only vary between blocks and are to be compared within country.
 - b. Resources available.
5. We are currently selecting one block per site.
6. It is not necessary to measure every block in a country at the same time. The questionnaire is designed as far as possible to be robust to short term variations in

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conditions. In the first round of measurement blocks should be selected within and between countries that are as varied as possible.

7. If the criteria for selection of a site within a country are met by an area very much larger than a 10 x 10 km block, then a 20 x 20 km or a 30 x 30 km block should be selected by random location within the area.

Villages

1. The definition of a 'village' should coincide with some level of local administration organization. The key criteria are that:
 - a. People within a village are a 'community' in the sense that there is a level of interaction and dependence among them.
 - b. It is possible to define who is/is not part of the village.
 - c. It is possible to communicate with the village (e.g. through a headman or similar to call a village meeting).
 - d. (Nearly) all households belong to exactly 1 village.
2. It must be possible to draw up a complete and up-to-date list of villages within each selected block (each site will be using the most appropriate source for this list).
3. A random sample of 7 (see below) villages should be taken from all those in the block.
4. If there are less than 7 villages in the block, select all of them (if the number of villages is too small, a larger block size should be considered).

Households

1. This survey is based on interviews of one or more individuals (ideally the household head and spouse) within the household who are able to answer questions about their household. Enumerators will be instructed to try to confirm responses with appropriate household members if and when possible. All of the questions refer to people who are regularly resident in the household. We are using the following definition of a household:

'A household is composed of a group of people living in the same dwelling space who eat meals together and have at least one common plot together or one food/income-generating activity together (e.g. herding, business, fishing) and acknowledge the authority of a man or woman who is the head of household' (Beaman and Dillon, IFPRI, 2010).
2. A complete list of households within each selected village must be generated. Official lists (e.g. from the government) are never 100% complete and therefore not good enough for our purpose. We must be confident they do not systematically exclude any subgroup. Therefore, a list of all households within each selected village must be generated under the responsibility of the survey site leader. The recommended procedure is described in the section "Building a household list in the village". Alternatively, a participatory village mapping approach may be used to

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construct the sampling frame for household selection. This approach is feasible when villages are not too large and a qualified facilitator is available; it also invites community participation and does not directly question official lists.

3. 20 households are selected at random for measurement from the list within each village. The procedure to sample households in the village is described under "Selecting a sample of households".
4. Note that while it would be desirable to stratify household sampling, there are no consistent variables available from all sites to use for stratification before village-level studies are done.

Drawing a list of households in the village

This is needed to be able to select a random sample of households for the baseline. There are a number of approaches to prepare this list and each partner will need to adopt a single approach for the villages in the site. These are some suggestions:

Traditional survey approach

1. Use a traditional survey team approach visiting and numbering every household in the village. We should not rely on an official list that may be available from village authorities, however having access to one may be useful as a starting list that needs to be verified against the households you find in the village. Therefore if you can find an official list, use it.

Building a household list using a traditional survey approach involves:

- a. Obtaining permission from the village authorities to compile/confirm/update the list of households. Ideally the village authorities will also inform the community members so as to avoid suspicion or conflict while the list is drawn. Make sure the village authorities know that the team will be numbering the dwellings (we suggest you use chalk for numbering the dwellings).
- b. Establish the boundaries of the village. In partnership with the village guide determine how far the village extends and therefore the area that needs to be covered in the household listing exercise. A good approach would be to use the aerial map that the team will carry to the field and to discuss with the village authorities the boundaries of the village so that the field leader can ensure that all areas have been covered by the household listing exercise.
- c. Engage a village guide. This is someone from the community who knows it well and can accompany the team during the household listing and numbering. Discuss with your village guide what is a good starting point for the exercise. It is often advisable to start from 'an identifiable end point' in the village where a clear geographical reference can be established - this will be useful when the households selected for the sample need to be identified.
- d. Go from dwelling to dwelling numbering them and registering them onto a **Household Listing Form** (see format provided in file *Household Listing Form.docx*), until all the households in the village have been included. In this case, it is important that households that are difficult to reach are not ignored.

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2. Drawing a participatory village map is a good method to build a household list. An approach that has worked well in villages of moderate size (up to 300 households) is described below.

Community mapping with cards

Participants

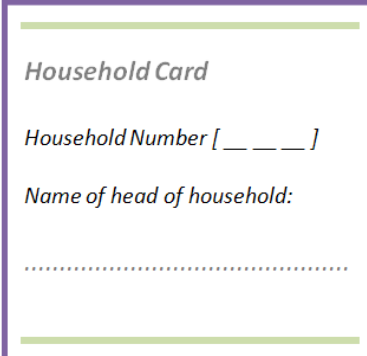
This is a group activity, probably through a focus group (FG). Community members are invited to participate in the mapping of households and to verify that the team makes one card for every household in the community. Participants in the FG should include a wide range of community members, ensuring that both, male and female individuals are present; that they live in the community and have knowledge of who is who. The FG should have at least 5 members and preferably not more than 10. However if a large group gathers facilitators should not send away any of them. This activity will require one facilitator and one note-taker. The main task of the note-taker will be producing household cards.

Procedure

Introduction of team members, explains the background to the baseline survey, explain that we are interested in preparing a map with that includes all the households in the village, then request participants to introduce themselves. Permission should be sought to make notes of their answers.

Explain that for every household in the map a card will be prepared containing the name of the household head. This card will be used to select at random the households that will be interviewed by the survey.

The map should be constructed on the floor, and not drawn on paper. Start to build the map by establishing the boundaries of the village and useful reference points. Then start placing households in the map, use locally available materials to represent each household. Prepare a card with the name of the household head and a sequential number (as shown in the example card) for each household that is added to the map.



The image shows a sample 'Household Card' enclosed in a purple rectangular border. The card has a light green header bar at the top with the title 'Household Card' in a dark green, italicized font. Below the header, there are two lines of text: 'Household Number [_ _ _]' and 'Name of head of household:'. The text is in a dark green, italicized font. Below the name line, there is a dotted line for writing. At the bottom of the card, there is another light green bar.

If you have an official list, prepare the cards in advance and ask the FG to place each household in the map. As you go through the household list, make sure you probe for households that do not appear on the list, and identify households that are on the list but no longer exist in the village.

The process of constructing the map should also be used for the FG participants to verify that all households are included. Make sure that the work is done in a public place so that people in the village can drop by and ensure that their household has been included.

At the end of the process, copy the map on to paper, you may also take photos of the final map. Collect all the cards as they will be used to select households for the baseline survey interviews.

The copy of the map and the resulting list of households transcribed to the household listing form should be included in the field report from each village.

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Procedure to select the sample of households from the village list

Selecting a starting cell for the random number table

1. Choose a row and column number to identify the first household. Use the tables below to choose your row number first and then the column number.
2. Go to the cell given by your selected row and column numbers in the table of random numbers between 0 and 600.
3. Decide whether to move up, down, left or right. Start at the selected cell, take the first 20 distinct numbers within the range of sequential numbers for households in the village. This will be your sample of households.

In those cases where household replacements (see criteria for replacing households) are needed, steps 1 and 2 of the procedure for selecting a sample should be repeated, and the replacement household will be the first selected cell if it has not been already selected. If it has been already selected, use step 3 to select another number.

Table to select the column number

Select the column number from the table below. To do so, close your eyes and put a pencil on the table. That will be the column number on the table of random numbers between 0 and 600.

1	2	2	8	11	12	7	5	7	6	11	12	12	1
1	11	8	6	12	5	9	10	8	3	5	1	3	4
10	8	4	10	5	9	9	1	7	3	12	11	4	8
3	3	1	12	12	2	5	10	8	9	9	9	7	9
2	9	3	4	7	5	12	1	1	12	12	7	8	6
5	9	6	2	6	7	8	6	12	12	5	6	7	4
11	1	7	3	12	1	4	10	10	5	10	8	2	9
10	10	10	9	3	6	6	3	4	4	11	5	9	1
6	4	2	7	8	4	8	1	2	4	6	11	3	8
7	11	1	4	9	6	3	10	5	2	3	3	6	11
2	11	12	4	10	7	5	2	7	7	9	10	11	11
8	11	5	11	3	10	1	4	5	2	8	2	2	6

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Table to select the row number

Select the row number from the table below. To do so, close your eyes and put a pencil on the table. That will be the row number on the table of random numbers between 0 and 600.

14	19	3	13	10	34	44	23	8	28	30	41	26	7	26	17
45	10	35	49	26	38	8	29	18	34	16	15	35	12	41	17
41	32	43	42	43	22	37	34	28	9	10	21	2	8	27	36
22	46	15	10	35	40	19	21	49	34	42	27	2	47	30	47
47	11	4	41	38	41	29	35	23	35	44	44	2	12	6	13
21	7	16	28	22	3	14	4	4	35	48	36	15	47	42	18
4	8	36	10	20	37	48	39	16	1	25	24	5	12	27	9
24	38	27	50	38	7	37	42	2	4	37	42	50	49	39	37
44	15	14	18	6	5	7	6	23	36	31	48	39	24	40	17
29	45	31	2	41	33	17	20	3	39	44	5	29	35	49	39
21	18	30	43	7	26	37	13	15	40	4	5	19	18	3	42
28	11	29	27	12	17	11	33	14	23	15	41	35	46	26	1
16	18	25	50	20	22	39	47	6	1	13	3	26	48	19	16
30	15	45	11	34	40	8	10	16	2	31	36	45	38	15	33
31	11	43	16	26	33	6	25	4	7	31	41	44	42	1	44
30	19	38	3	11	48	50	12	13	21	29	25	27	22	40	30
33	38	27	38	32	29	2	32	36	19	18	21	43	31	24	31
32	45	47	37	33	7	46	45	10	6	9	44	48	50	34	32
6	25	47	48	2	17	32	40	11	50	20	25	5	24	25	3
23	18	43	21	8	28	37	43	20	45	48	1	49	17	32	50
9	45	9	16	17	39	5	23	22	24	31	34	50	28	24	7
23	13	14	30	32	6	47	43	14	46	36	46	9	19	20	46
5	20	3	49	1	19	20	12	12	33	9	4	46	10	1	13
27	14	40	8	21	22	14	28	34	8	24	39	11	29	1	28
22	25	9	5	49	40	42	46	23	33	26	49	13	30	12	36

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Random numbers between 1 and 600												
	1	2	3	4	5	6	7	8	9	10	11	12
1	429	190	72	99	567	135	238	82	180	418	378	74
2	116	455	477	502	277	70	542	148	119	130	169	570
3	333	23	387	497	431	265	591	485	327	385	158	63
4	194	161	311	182	351	232	508	9	545	436	592	58
5	372	470	6	113	137	42	149	45	124	107	434	276
6	377	374	258	306	145	512	464	66	92	559	557	95
7	278	346	133	101	501	252	450	552	243	308	85	4
8	118	553	287	202	424	475	324	396	240	80	275	226
9	376	562	565	581	472	24	176	197	338	536	550	123
10	221	457	286	65	566	354	260	465	494	134	421	88
11	212	289	239	284	506	544	52	293	79	312	547	59
12	218	44	451	142	367	360	280	273	456	112	322	341
13	267	193	538	392	449	2	564	355	153	189	406	493
14	423	27	345	126	89	563	556	215	22	390	114	264
15	400	340	515	510	568	168	10	39	256	187	319	259
16	127	310	81	13	249	228	518	51	71	186	242	147
17	229	138	129	551	437	1	599	416	531	442	68	395
18	555	206	98	332	461	486	438	268	251	301	247	237
19	358	399	575	217	329	53	179	463	520	205	315	262
20	325	30	21	36	356	26	282	408	589	270	177	78
21	220	38	554	144	198	183	3	94	140	90	419	191
22	211	363	174	67	375	440	300	317	50	600	7	62
23	597	97	590	347	196	150	231	487	361	48	447	474
24	33	152	192	430	560	285	209	208	546	326	526	573
25	528	357	490	389	365	303	576	549	103	139	584	427
26	380	271	155	370	540	343	336	120	366	307	156	213
27	403	388	583	34	131	195	471	543	230	435	448	412
28	480	373	446	115	236	537	478	321	539	14	411	331
29	253	337	141	466	425	574	598	383	407	479	219	414
30	216	266	523	404	393	318	41	484	460	459	596	458
31	525	146	521	454	40	441	594	481	175	222	505	296
32	413	398	513	170	313	410	295	488	569	102	75	529
33	181	261	86	379	29	109	524	132	578	384	489	16
34	154	462	290	241	452	159	106	369	353	483	167	382
35	522	445	46	320	172	165	54	496	577	499	77	32
36	43	302	199	69	235	143	359	49	292	47	328	121
37	55	5	572	56	234	507	160	18	125	530	17	371
38	246	386	64	587	31	76	304	100	595	433	476	117
39	516	128	444	163	467	244	316	593	299	233	20	96
40	344	514	352	588	83	415	405	394	428	469	498	582
41	504	25	401	314	548	111	579	580	349	426	339	585
42	298	274	381	108	224	91	305	541	84	473	432	586
43	517	93	348	439	527	151	281	248	8	245	185	491
44	223	561	533	482	509	323	257	453	503	279	255	443
45	105	294	495	15	136	402	397	342	391	203	200	57
46	250	164	104	227	178	534	225	362	171	210	417	272
47	35	37	500	532	173	188	19	558	207	204	214	162
48	535	511	335	269	11	288	263	166	12	334	309	297
49	420	364	28	110	519	184	422	283	492	157	73	468
50	201	61	291	350	571	368	122	409	87	60	330	254

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Criteria for replacing households

This baseline survey will make every possible effort to interview the households selected through the sampling process described above. Only in exceptional circumstances replacement of households will be allowed. A household can be replaced if:

- The enumerator has made a minimum of three pre-arranged attempts to interview the respondents in the household and has been unsuccessful. In this case, the enumerator will have to request in writing a replacement to the supervisor. The request must explain the efforts made by the enumerator to carry out the interview and why these have failed.
- If the respondent blankly refuses to participate in the interview. In this case, the enumerator must seek support from the field supervisor. The supervisor will visit the household and engage with the respondent to try to obtain the interview. If this fails the supervisor will file a report explaining the reasons for refusal.

If a replacement household is required the supervisor will follow the sampling procedure as described above.

Notice that each site will return 140 completed questionnaires, 20 per village. A smaller number will be considered acceptable only when the selected villages contain less than 140 households.

If after household lists have been constructed in the selected villages, the number of households in the selected villages is less than 140, more villages will need to be included to ensure that the intended sample size is reached. This should be approved by the team leader of the baseline survey in each site and a note should be included in the baseline report explaining the decision.

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Justification of sample size

The proposed sample sizes are:

- 1 block per site
- 7 villages per block
- 20 households per village = $7 \times 20 = 140$ households per block.

The number of household per block is based on the following ideas:

- We want reasonable estimates of all indicators at the block level.
- Many indicators are of the type 'percent of households who do X'. If we wanted to measure a change in this percentage from about 25% to 50% we require around 60 households (from standard power analysis). As we want to disaggregate by subgroups, assuming a disaggregation splits the population into two similar sized groups, we need to double this to about 120.
- Now add a few to compensate for intra-village correlation.

The number of villages is based on:

- Both village level and household level information is improved by maximizing the number of villages and reducing the number of households per village.
- All logistical costs (travel, overheads of getting permission, generating sampling frames, organizing village meetings etc) increase with number of villages.
- Without detailed cost information we take a guess: 7 villages is sufficient to find out if there is consistency within the block, 20 households per village is sufficient to have a good chance of capturing at least 1 household of any type that occurs in at least 10% of the population.

The overall sample size suggested does not include 'insurance' for extensive non-response or loss of data.

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Implementation Plan

A proposed implementation plan for the household baseline survey at each site should include details about each activity with respect to timeline, responsibility, location and budget (including other resources needed). An implementation plan should include the following components:

- block selection process
- team composition and team size determination (include data clerks)
- team recruitment
- translation and back-translation of the questionnaire into the local language
- training of site survey team
- field planning (including all logistics: transport, accommodation, food, etc.)
- get village lists and randomly sample 7 villages to target for this survey
- generate complete household lists and randomly sample 20 households per village
- data collection: questionnaires of 20 households in each village
- reports back to survey coordinator: from interviews, from villages, from site
- organization of data entry
- double data entry
- schedule regular backups
- filing of questionnaires
- data cleaning
- initial data analysis
- sharing of data files and copies of filled questionnaires, reports to CCAFS
- final report and annexes from site to CCAFS

Translation of the Questionnaire

The questionnaire has to be translated into the local language. To ensure the quality of the translation it is necessary to get the questionnaire back-translated into English by another person. The enumerators need to use the translated questionnaire. This is important as each enumerator may be translating it differently and may be interpreting questions, rather than just translating them. Training of enumerators must be done using the translated questionnaires and not the version in English.

Enumerator and Supervisor Recruitment Guidelines

The recruitment of well-qualified enumerators to conduct the interviews is crucial to this process! The enumerators need to be experienced and qualified in the following:

- collecting data through quantitative questionnaires
- engaging farmers in open-ended semi-structured questionnaires, including listening, processing and probing for more detailed answers, as well as synthesizing and recording the story lines the farmer tells in detail
- subject matter specialists with good knowledge of farming systems, agronomy or livelihoods
- speaking the local language

Thus, the enumerators to be recruited for this household baseline survey need to have good

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quantitative and qualitative data collection experience with interactive skills, as well as subject matter specialists. They need to be good speakers of the local language the interview will be conducted in.

Guidelines for Field supervisors

Duties of the supervisor

- Ensure that the logistic arrangements and materials for each visit are sorted out before departure to the field.
- Engage with the relevant authorities to ensure that the survey can be carried out in every selected village
- Draw a sample of villages following the procedure described in the manual
- Ensure a good household listing form is prepared in each selected village
- Draw a sample of households following the procedure described in the manual
- Join as an observer the process of interviewing in the villages. This should be random checks while the enumerators interview the respondents.
- Check every questionnaire for completeness, clarity and consistency. Once the questionnaire has been checked and the supervisor is satisfied with its quality, he/she should sign it to indicate that he/she assumes the responsibility for its quality.
- Record the GPS references for each sampled household
- Ensure that the 140 completed questionnaires are returned from each site.
- Deliver the complete set of questionnaires to the Baseline Team Leader
- Present a field report to the Baseline Team Leader for each village highlighting any events that were different from the plan, specific comments about the performance of the team of enumerators, justification for replacements, and any observations he/she may consider pertinent for the interpretation of the data from the village. The village map and household cards (if participatory village mapping was done should also be included).

The field supervisors act as team leaders in the field and will participate in the training event for enumerators before data collection starts. This person assumes the duties of a supervisor and is responsible for the smooth implementation of data collection through managing logistics on the ground, managing the enumerators in the field and troubleshooting where needed. The supervisor needs to speak the local language and make sure that the questionnaire has been translated and back-translated.

The field supervisor has important role to play in adequately entering the village, introducing the survey purpose and team to the village leaders. This person has to engage actively throughout the data collection process to ensure smooth implementation and high data quality standards.

The supervisor needs to be equipped with a GPS unit (that is georeferenced appropriately) and needs to be trained in using the GPS. The supervisor is responsible for recording the GPS coordinate for each households that is being interviewed (the UTM reading will be recorded). This is particularly important for this baseline, as CCAFS is planning to revisit the same households over a ten year time span.

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Enumerator management is critical for the successful implementation of the data collection process, as well as for data quality assurance. The supervisor has to engage closely with the enumerators, provide support and supervision in the field as needed and manage any concerns that may arise during the data collection process. The supervisor has to ensure that enumerators stay motivated throughout the process, countering any symptoms of enumerator fatigue appropriately. The supervisor needs to monitor enumerators, carry out surprise visits and actively manage the enumerators to adhere to high standards of interviewing.

Suggestions for the training of field supervisors and enumerators

Training of supervisors and enumerators is crucial to ensure good quality data for the baseline. While most teams are experienced in survey work, we would like the baseline team leaders to take into account the following elements for this training.

The process of training is the responsibility of the Baseline survey team leader.

The training event has the following objectives

1. To familiarize the field teams with the objectives of the survey, with the methodology of the baseline and the reasons why this level of standardization is required by the CCAFS baseline.
2. Supervisors and enumerators must be able to apply the sampling procedures described in this manual.
3. Supervisors and enumerators must have an in-depth knowledge and understanding of each question in the survey questionnaire. This is more than being familiar with the questions, it implies knowing what is being asked, why it is being asked and how it should be asked.
4. To explain the roles and responsibilities of each member of the field team, and how a chain of responsibilities has been established to help in ensuring data quality.

The training event must include the following activities

1. Discussion of entry procedures to ensure that the required protocol is followed in the field. This includes entry into the village and the introduction of the survey to the respondents, for the latter in particular the use of the paragraph for obtaining consent.
2. Discussion of the roles and responsibilities of different members of the team.
3. Reading, discussing and using the questionnaire under classroom conditions. It is recommended that demonstrations by the team leader or competent members of the team on how to conduct the interview are planned as part of the process of familiarization with the questionnaire. Role plays where enumerators take the place of interviewees and interviewers should be organized, witnessed by members of the field team and discussed to improve the ability of the enumerators to carry out interviews.
4. Using the sampling procedure on pre-prepared village and household listings.
5. A field base practice in which enumerators and supervisors can put in practice the process of household selection, geo-referencing of households, interview, report writing. This experience must be discussed and lessons drawn after the field visit.

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6. Planning the field trip.

It is very important that translation of the questionnaire into the language of the respondents is done **before** the training of enumerators and field supervisors takes place. While references to the English version of the questionnaire may be needed during the training, the questionnaire in the local language(s) should be used in all training activities.

The Household Questionnaire – An overview of what information we trying to capture and why

Section I: Households respondent and type

This survey is based on interviews of one or more individuals (ideally the household head and spouse) within the household who are able to answer questions about their household. Enumerators will be instructed to try to confirm responses with appropriate household members if and when possible. All of the questions refer to people who are regularly resident in the household. We are using the following definition of a household:

‘A household is composed of a group of people living in the same dwelling space who eat meals together and have at least one common plot together or one food/income-generating activity together (e.g. herding, business, fishing) and acknowledge the authority of a man or woman who is the head of household’ (Beaman and Dillon, IFPRI, 2010).

The information captured in this first section will be used, for example, to cross-tabulate such things as access to information by male-headed versus female-headed households (in Africa), or by caste (in India).

Section II: Demography

This section provides information on the total number of people in the household as well as the number of adults and children and their levels of education. This will be used for any cross-tabulations that look at per person rather than per household questions, or we may want to cross-tabulate views on climate information access/use or indices of food security by age, sex or education level.

Section III: Sources of Livelihood Security

Here we are focusing on the issue of diversification of livelihood sources as one key way households deal with high levels of risk as well as climate variability and change. We would like to focus on things with linkages to natural resources and climate where feasible. After the baseline is collected, these data will be analyzed by:

1. Calculating diversity of farm production/consumption/cash source and cross-tabulating by key subgroups (household type, asset base, etc.), indicating which subgroups are most vulnerable due to low diversity.
2. Cross-tabulation of income sources by key subgroups, indicating which subgroups are most dependent on farm revenues.
3. Cross-tabulation of changes in income sources by key subgroups, indicating which subgroups are currently facing changes in revenue source.

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At the time of follow-up, these data will be analyzed by calculating changes in either individual products/income sources or in diversity and cross-tabulating with key subgroups, indicating, for example, who has increased their number of livelihood sources.

Section IV: Crop, Livestock, Tree and Sustainable Land Management (SLM) Changes

This section is designed to show adaptability and highlight the kinds of changes people have been making (not necessarily related to the weather).

The aim is to pick up individuals who are able to adapt and why, and those who aren't and why they are not able to adapt (these may be sub-groups that we don't need to focus on at all in this program). The aims are:

1. To measure the adaptability of farmers, finding subgroups most and least able to change and those who are used to change.
2. To measure the importance of climate considerations relative to other reasons for change. We want to avoid asking direct questions about climate (because they will tell you what you want to hear).

Section V: Food Security

Questions here are designed to provide a simple indicator of the length of hunger period; we would like to see fewer 'hunger' months for our households over the long term.

One objective of the baseline survey is to identify the sub-groups that are most vulnerable. Is the most effective strategy to diversify livelihoods so they aren't depending on their own farms or to increase the amount of food produced on their farms? We should be able to get at some insights into this.

For example we can cross-tabulate this with sources of livelihood/relative importance of on-farm and off-farm livelihood sources (e.g. we might see that households with off-farm income are avoiding hunger periods which households without off-farm income aren't; we can also pick up whether households are being forced to sell food and are then going hungry).

Section VI: Land and Water

We want to see change in areas that are degraded; areas which are planted with trees; we want to track changes in areas under food production for our households. We have included tenure firstly because we believe security of tenure is a major determinant of investments in SLM, and secondly because we predict that holders of larger areas are going to be more able to adopt new practices and to adapt.

Section VII: Input, Credit and Markets

We are looking at the use of inputs, credits and insurance as an indicator of access, as better access to inputs, markets and credit can help people adapt to climate change.

Section VIII: Climate and Weather Information

Here we are looking for simple indicators of where people are getting different kinds of climate and agricultural related information. (Note: a farmer will say "from the radio", i.e.

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he won't know the source or who on the radio gave/provided the information; the important thing to note here is that we have to ask that question at the level of the provider, thus we will also be carrying out surveys of climate and agricultural information and service providers). We also want indicators of use, quality and timeliness of the information.

Aims: to measure if farmers are receiving climate and weather information, and the extent to which it is useful and how this varies by subgroups.

Section IX: Community Groups

The idea here is to capture some indications of how people are using community groups or social networks to deal with climate-related challenges. Since most people belong to multiple groups, we want to focus on groups that are doing natural resource management activities that help mitigate risk and adapt to variable and changing climates. (Note: we will be able to explore this in more depth with complementary village-level surveys, e.g. women's food security-related groups). We'd like to see more collective action/community groups helping people adapt to a changing climate. When extreme weather events happen, how important are groups relative to other sources of assistance?

Section X: Assets

This section provides baseline information on a few key assets/indicators that can help us track changes in the level of welfare of the household over time. They include indicators of wealth/progressiveness of farmers that we can, for example, link to use of adaptive land management practices. While food, clothing and shelter are always first on poor households' "Asset Ladders", the food security section will focus on food, and it is assets a little higher up the ladder that are best for demonstrating changes in household well-being (i.e. they are able to buy a bicycle or cell-phone). We are also looking at assets that are both a welfare indicator and will also complement the information we are asking about how people access climate information (e.g. radio, TV, cell-phone) and food security (e.g. farm implements).

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The Household Questionnaire – Guidelines for Field supervisors and Enumerators

Introduction

The above part of the Baseline Household Survey Manual presents information that is valid across all sites of the CCAFS Household Baseline Survey. The following section of the manual has to be site specific needs to be adapted and refined by the Team Leader and Field supervisor to meet the local realities at each site.

Roles and responsibilities

The Team Leader is directly responsible for communications with CCAFS. He/she will develop the implementation plan and budget for each site, as well as coordinate the site team, organize logistics and adapt this Baseline Household Survey Manual to each site. The Team Leader is responsible for reporting and delivery of study products to CCAFS in a timely manner, while adhering to the quality standards set out in this manual and the agreed upon deadlines.

The Field supervisor is responsible for ensuring that the work of the enumerators is done to the highest quality standard. The Field supervisor is responsible for generating the complete village list and the random sampling process of households. He/she will assign the selected households to interview to the enumerators. He/she will record the geographical position of each household that is being interviewed with the GPS. He/she verifies that each interview was carried out in the correct household and checks and signs each questionnaire for completeness, accuracy and readability. After finalizing the site data collection, the Field supervisor will deliver the completed questionnaires of the 7 villages at each site to the Team Leader and complete a site report that includes the list of households selected and an explanation for any households that had to be replaced. Copies of the completed questionnaires and field reports from each village are to be attached to the site report.

The Enumerators are responsible for interviewing the households that were assigned to them and for completing the questionnaires in a complete, accurate and readable manner. The Enumerators will follow the procedures outlined in this manual and conduct themselves in an appropriate manner. If the Enumerators encounter problems during data collection, they are to report the problem to the Field supervisor in a timely manner. The Enumerator will deliver the completed and signed questionnaires (including the story line) to the Field supervisor at the end of each day.

Mode of operation in the field and conduct

Travelling to the Sampled Village

It has been outlined above how to randomly select the 7 villages for data collection. Now that you know the location of a village where you have to go for the household baseline survey in relation to its location in the site and district, you will be expected to make firm arrangements to travel to the district capital. A letter of introduction will be provided to support and introduce you to the district authorities (and lower level authorities, if needed). Since the letter may not contain much detail, you will be expected to say more about yourself, program and its objectives to them. Kindly, request the district officials to introduce you to the local leader/village head a day or some hours before actual

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implementation of your household baseline survey starts.

Mode of Operation in the Field

A team of a Field supervisor and several Enumerators will work together in one village for the period of generating the complete list of households for the village, randomly sampling 20 households and conducting the interviews in these (the exact number of days depends on your implementation plan). The team will conduct the household listing process and sampling together. When the sample is drawn the Field supervisor and the Enumerators will all be involved in administering the questionnaires to the selected households and their individuals. The enumerators will conduct the questionnaires in an appropriate location, ideally within the household. A public place may not be appropriate as that might attract a lot of attention from other village members and thus disrupt the process of a household interview.

Arrangements for the team to travel to the next village will have to be made by the Field supervisor in coordination with the team leader. Travel will take place when all outstanding work in the first village is completed. The Field supervisor will make sure that all work is completed in the first village before moving to the next.

- Household listing and sample selection are properly done before the process of data collection using the household questionnaire starts.
- While the Enumerators administer their questionnaires, the Field supervisor monitors the quality of work by his/her Enumerators. Some time will have to be put aside to check how work is progressing. This should not be a difficult thing to do as everybody will be working in the same village. All mistakes the Enumerator commits ought to be rectified while in the village. The Field supervisor will have to check every questionnaire for a given Enumerator. Correction of mistakes of one village when you are in another village will be a cost of the Field supervisor.
- No Enumerator is left behind completing his/her remaining tasks in the village. All the tasks assigned to the Enumerator should be finished before the team decides to leave the village.

Conduct

At each stage of the Household Baseline Survey, it is recommended to conduct oneself in a polite and confidential manner. The Enumerators are to conduct themselves in a polite, sensitive and attentive manner throughout the entire interview.

Be polite when you approach one of the selected households, make sure you follow the locally appropriate ways of greetings and introducing yourself. Strongly adopt the confidentiality statement provided for household questionnaire. The interview process has to take place in a polite way. Keep respectful behaviour and eye contact throughout the interview and be attentive and interested in the answers the respondent provides. Be sensitive to household needs and make sure you do not take up more of their time than scheduled and/or absolutely necessary. Be prepared to arrange the interview at a time when it is convenient to the respondent, remember that they are offering information on a voluntary basis.

Getting Started with the Household Questionnaire

If the village household listing and sample selection are completed in good time, you may

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rest for a short-while before you start conducting the household interviews on the same day, otherwise if you have finished late, arrange to start household interviews on the following day. In either case you need to plan your movements properly in terms of where you start and finish to avoid wasting time moving up and down the village. Since you are aware of the location of selected households you should be able to know where to start from and easily locate the sampled households. You may need the services of a village guide to lead you to the selected households.

The questionnaire will be translated into the local language. Be sure to use exactly the wording in the questionnaire and do not interpret the questions. Also avoid leading questions and listen to the responses and do not assume you know the answer.

Use the codebook to write the correct codes for the answers provided. In completing the questionnaire, do not leave any fields blank. Whenever a mistake is made, cross the wrong answer and write a correct answer next to it.

Some questions will require you to synthesize and write down the story that the respondent is telling you. Use the empty pages at the end of the questionnaire for this.

You need to pay particular attention to the instructions outlined in each question in relation to how to ask it. Follow these instructions faithfully, in particular, do not change their wording. If the respondent requires clarification or explanation you can give it but after the question has been asked in the standard form. When you are probing in order to get a more detailed answer, make sure not to ask leading questions so as to avoid biasing the response.

Every field of the questionnaire needs to be filled. The story lines of some questions are an integral part of the questionnaire and a questionnaire is not complete without these. Make sure you finalize the questionnaire at the household in case you need to ask for clarifications or follow up.

The codebook

A codebook has been prepared for the baseline questionnaire. This is necessary as many questions in require consulting the same set of codes and it is more efficient to have the codes in a separate document from the questionnaire. Each field team member must have a copy of the codebook and must learn to use.

The baseline team leader is responsible for adapting the codebook to the local site specific conditions and requirements. Codebook should be adapted to local conditions and submitted to CCAFS for verification and as part of the documentation of the baseline.

- Ethnicities codes include all main locally relevant ethnicities. Also include migrant communities that are currently living in the village.
- Crop codes include all main locally relevant crops, including cereals, legumes, cash crops, fruits, vegetables, tree crops, fodder crops, etc.
- Farm animal codes include all main locally relevant farm animals, including not only livestock, but all other types of animals like poultry, small stock, fish, etc.
- Source of weather information codes include all main locally relevant sources of weather information.
- Aspects of farming system change codes include all main types of farming system changes.

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Some questions will require that you record codes. A card of common codes and codes for specific questions has been adapted to the site and provided to you ahead of time. For answers that require the use of a code, please refer to the codebook and use the appropriate code.

Please remember that we also have the following **common codes**:

- -6 “no agreement by household members” if more than one household member participate in the interview and there is no consensus reached amongst the respondents for a particular question.
- -8 “not applicable/not relevant” some questions may be skipped if the answer is “no”; in that case use this code to fill the blanks
- -9 “cannot or would not respond”: use this code if you cannot get an answer

Introduction and Consent by Main Respondent

- At the top right of the every page, record the site ID and the household ID. The site ID will be assigned by CCAFS and provided to you ahead of time; the household ID is the number coming from the household list that was generated for each village. This is a very vital initial activity. Remember to do that in order to ensure that you work with the right sample.
- Identify an appropriate respondent for the interview. Ideally you interview the household head or spouse. If nobody is around to answer your questions you are required to revisit the household at least three times. Only once you have done everything you can to talk to the household, you may inform the Field supervisor.
- Read out the introduction and confidentiality statement provided at the beginning of each household interview. You ought to own the statement in order for the interviewee to be confident in you. This must be done before you start the interview.
- Introduce yourself as a member of the organization that you work for (e.g. university, consulting firm). Your organization has been hired by a multi-institutional program that is an international network of research organizations (do not mention climate change and long-term involvement).
- These interviews target the household head. In his/her absence the spouse or any other responsible adult in the household should be used to handle the interviews. Record if the main respondent is giving you consent for the interview. Repeat the confidentiality statement if another household member joins the process.
- Ensure that the respondent understands that names will not appear in the information we publish. We will use the information they provide but make sure that names of the household will not be published.
- If a respondent refuses consent, the interview will be stopped at this stage. The respondent can also opt out of the interview at any time. The questionnaire has to be submitted to the Field supervisor. Your Field supervisor will randomly sample another household for you.
- Be honest that this interview will take about 1.5 hours of the household time.
- Respondents may have expectations and it may be tempting to promise gifts to ensure cooperation. It is very critical to be clear that there are no benefits involved.

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Avoid promising payments or gifts to respondents. This is not at the discretion of the survey team. Instead, the Enumerator has to build confidence and explain the survey in a manner that raises the respondents' interest.

- Respondents may ask if you have permission to conduct the interviews in his/her village. You can assure them that the district authorities and local leaders have granted your organization permission.
- Please remember that you are not to mention climate change or a long-term program, because respondents tend to tell you what you want to hear. You may explain that this information will be used to better understand farming practices. That we want to listen to the respondents' story about their farming practices and problems they face. This improved understanding may be used to plan potential future partnerships with farmers and to identify potential information needs in the village.

The questionnaire question-by-question

Section 0: Data Handlers

This is a very critical section of the questionnaire, as it clearly assigns responsibility to the interviewer (enumerator), the field supervisor and the data entry clerks. We are asking for signatures from all the team members.

These are available on the household listing form and household questionnaires. In all cases, completion should be done clearly and readably/legibly. For the identification panel completion should be done at the beginning of the exercise while the control panel is done at the end of it to ensure that completion is satisfactorily. Note that satisfaction in processing the questionnaires will be attained if all sections of the questionnaires are legibly, accurately, and consistently and orderly done before endorsing your signature. This implies that before you endorse your signature, you need to go through the questionnaire once again so that you are lest assured that everything is fine according to the reference point.

It will be advisable if this is done before you leave the village so that if you identify some irregularities, these are sorted out before while there.

The field supervisor will check the completed and signed questionnaires for completion and, when satisfied sign.

The roles and responsibilities section above clearly outlines the process to be used. This uniform process is vital in ensuring that a high level of data quality is maintained throughout the survey.

- Each team member will be assigned a unique identifier code that is to be recorded. This code must be a number with two digits.
- The interviewer signs when he is sure that the questionnaire is complete. With his/her signature the interviewer assumes responsibility for the questionnaire.
- The field supervisor signs when he/she checked the questionnaire and has confirmed that it is complete and meets the data quality standard. With his/her signature the field supervisor assumes responsibility for the questionnaire. Responsibility now no longer is with the interviewer.
- The two data entry clerks sign when he/she has completed the data entry into the

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data entry format provided. The data is entered double by two data clerks to ensure quality.

- GPS coordinates should be recorded by the field supervisor in UTM format. This will help to find households in the future.

Section I: Households Respondent and Type

Q1. Record the first name and last name of the household head separately (1a and b), as registered in the household list. If it is appropriate to also record a middle name then add this after the first name.

Q2. The household head and/or the spouse should be the main respondent (or another adult knowledgeable of the household activities). This question helps confirm whether or not the respondent is the household head or a permanent member of the household. Record the first and the last name accordingly (2a and b). Make sure the respondent is a member of the household.

Q3. Do not ask this question but record the appropriate answer based on your observation of the respondent.

Q4. Ask what the relationship of the main respondent is to the household head.

Q5. The codebook (site specific) has the codes for this question. Please ask this question in a locally appropriate, non-offensive manner.

Q6. Ask about the type of household the respondent belongs to in an appropriate manner. Maybe start by asking if the respondent is married and probe about the household head (or household decision maker). Remember that if the husband is de facto away for a long period, say a year or so, the wife assumes the role of the head of the household.

Section II: Demography

1. When asking about the number of household members, remember to make sure that the respondent includes themselves and all other adults as well, as respondents are too used to being asked about the number of children. They should also count only the people who live in the household the majority of the time.
2. Record the number of children under five that live in the household
3. We are asking about age, so please be specific. This is not a question about respect, so certain concepts (e.g. *mzee* in EA) are not appropriate. People may not know their age, in that case please use your own judgment (if the people are present) or use some important local event that is roughly 60 years ago (e.g. independence, a major drought, death of important person, etc.).
4. The highest level of education of any permanent household member applies. We are not interested in former household members who migrated and are no longer there.

Section III: Sources of Livelihood Security

This section addresses questions about on farm and off farm activities (farming is defined as any agricultural activity related to cropping or livestock keeping). Make sure that distinction is made clearly when asking the question.

1. This question specifically refers to production from the own farm and not from outside over a 12 month period. Ask this question going across the rows. If the

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answer to column one is “no”, proceed to the next row. The second column asks who does most of the work, i.e. the main person responsible for the work, i.e. who provides the labor (not necessarily the owner or decision maker); if this work is shared between several household members then use “several”; if this work is done by hired labor or other non-household people use “other. Please make sure to distinguish between food crop (raw) and food crop (processed); the latter refers to food(s) that is/are consumed or sold after changes(s) after harvest (e.g. boiling, removing husks (groundnut for instance), roasting, frying, grinding, etc.

2. This question specifically refers to harvested or collected products from outside the own farm (e.g. from community land, forests, etc.) over a 12 month period. This will include grazing livestock. Ask this question going across the rows. If the answer to column one is “no”, proceed to the next row.
3. This question asks about cash income from other sources. Ask this question going across the rows. If the answer to column one is “yes”, proceed to the next column; if the answer is “no”, proceed to the third column. For clarification, business refers to any other activities, such as trading, petty trade, hair cutting, etc. What payments of environmental services are has to be adopted to each site; generally we mean payments for planting trees, for water management, for wildlife conservation specifically on your own land, etc. Make sure not to repeat the answer under the next row.

Section IV: Crop, Livestock, Tree and Sustainable Land Management (SLM) Changes

This section covers 7 questions. We want to learn about changes made in the way the respondent manages land, crops and farm animals. If the respondent is too young to have been farming 10 years ago, ask whether their father has farmed at this location; what he did 10 years ago. If the respondent has been in the area over the past ten years, but has different plots, include his responses. If a respondent is unable to recall what happened in the last ten years, you may make reference to major events ten years ago, e.g. the millennium celebrations.

1. You are asking about the changes in land, crops and farm animals over the last 10 years. We are interested if the farmer was in this location, without necessarily farming the same plots.
2. Ask this question row by row. If the answer to the first question (Have you made changes) is “no”, proceed to question 3; if the answer is “yes” proceed to the next row. For the following rows use the separate codebook provided to you and list the most important crops that the changes were applied to (record up to for crop codes). With respect to growing a crop (in one season) we specifically refer to places where there are two rainy season; e.g. farmers may have stopped growing a particular crop in the small rains due to less rainfall.
3. List the crop codes from the codebook for the most important crops that are presently grown and consumed on the farm in the order of priority.
4. List the crop codes from the codebook for the most important crops that were grown and consumed on the farm ten years ago in the order of priority.
5. List the farm animal codes from the codebook for the most important animals on the farm today in the order of priority.
6. List the farm animal codes from the codebook for the most important animals on the

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farm ten years ago in the order of priority.

7. A to E: cover a complex set of questions and you will be asking this as an open-ended question. Please listen and probe for more detail, synthesize and write down the story that the respondent is telling. Questions 7a to 7e are linked questions. DO NOT go through these questions row by row but rather it is important that you probe for more information, until you have all the information needed to complete the tables. Each enumerator is expected to be familiar with these questions so that they are able to probe effectively without reading out the rows!

It is likely that most respondents will only talk about changes made to a limited number of crops and thus, answer no to most of these questions. The large tables offer enough space for the few innovative farmers we may capture.

Use the empty pages at the end of the questionnaire for recording a story line and submit this story line along with the questionnaire. When you completed the interview, make sure you stay at the household to fill in the codes for these questions accordingly, using the information you recorded during the story. Do not keep the respondent waiting. If you have follow-up questions or need clarification from the respondent, ask the respondent for clarifications. Make sure to not leave any blanks and use the common code for “not applicable/not relevant” if respondents talk about less crops than code boxes provided.

Remember to ask the respondent to tell you more about what changes he/she made to the crop varieties planted, referring to the answers provided to questions 2-4. For each crop that changes were made to probe for changes in varieties, in land, soil and water management (7a-b). Follow this by questions about why changes were made, probing for changes related to markets, climate, land, labor, pests and diseases or projects.

Once you heard a complete account of one crop, probe for changes to other crops, fruits or vegetables, cash crops, fodder or tree crops, etc.

- a. Variety changes refer to different varieties of the same crop being grown, e.g. change from hybrid maize X to maize hybrid Y. Do not record seasonal varietal shifts, particularly in areas that have two cropping seasons per year. For instance, farmers may grow hybrid X that is late maturing during the first season, and variety Y that is early maturing during the second season.
- b. Changes in land use, land, water or soil management include a range of possible options. Let the farmer tell the story of a crop, probe if needed.
- c. Record the answers as to why changes have been made in this table. If changes affected all crops use 01=Yes, 00=No in the last column “not crop specific”.

d/e Repeat the process above for farm animals.

Section V: Food Security

We are interested in a typical year, i.e. we want to capture an average year weather-wise rather than a drought year or really wet year. It may be easiest to ask the respondent which month their household harvest and until which month they consume this harvest. You could

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ask the following: *“I would now like to ask you to describe a typical food year for your household. For each month I would like you to say whether the food you consume is mainly from your own farm or from other sources. In addition I would like to ask which months, if any you, tend to find you do not have enough food to eat for your family (from any source).”*

1. Record from what sources food in a typical year mainly comes from in this household – their own farm or from off-farm sources (e.g. labor, food aid, remittances, etc.). You can ask what month they usually harvest and for how many months the food from their own farm is consumed by their family – code those months as ‘1’ (food consumed by household comes mainly from their own farm), and the other months as ‘2’ (food consumed comes mainly from other sources – e.g. purchased, gifts, food aid, etc).
2. We want to know about the months that the household faces shortages or struggles to feed their family sufficiently. Be clear that you code 1 for shortage and 0 for no shortage. Note that if food is available through other means (see question 1) then this is NOT shortage. Be clear what shortage means in the locally appropriate wording.

Section VI: Land and Water

1. Enquire about the items listed in this question and answer Y/N. We are looking for permanent long-term investments in water infrastructure on the farm (not meaning jerry cans and other small containers people use).
2. Record the name of the locally relevant land unit, i.e. ask farmers what unit they use to measure their land area. If the respondent does not know land size, please seek an answer from the spouse or other household member. Make sure you keep using this same unit for the following questions as well.
3. The supervisor is responsible for including the equivalent area in hectares (i.e. the conversion factor for locally defined land units into hectares here). This should be done in consultation with the enumerator.
4. Go through this question row by row. You are asking about the land area owned by the household and the land area rented (record the amount in the local land unit) and whether they also used community land (this is just a Y/N answer). The numbers in the column do not have to add up, as there may be double counting (e.g. coffee cash crop under tree cover or grazing in forest). Asking about land ownership may be sensitive and this question has to be asked locally appropriately.
5. Specifically ask about the number of trees planted on the farm itself.
6. Specifically ask about the number of trees deliberately protected on the farm itself. Protection here refers to keeping the trees, not cutting them down.
7. Record Y/N whether farmers have produced tree seedlings on their farm.
8. Record Y/N whether farmers have purchased tree seedlings to plant on their farm.
9. The answer is also yes, if households only hire a part of the plow set- up (e.g. hire the plow and provide the oxen or the other way around)
10. The tractor may be used for plowing or other farm activities.
11. Farmers may hire non-household people as farm laborers, throughout the year or at specific times of the year (e.g. during harvest).

Section VII: Input, Credit and Markets

1. Farmers may purchase seed, rather than using a certain amount of seed from their

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last harvest (i.e. local land races).

2. Ask whether the household purchased fertilizers. If the answer is “yes”, go to 2.1.; if “no”, skip to question 3.
- 2.1 List the fertilizers that were used (see list of fertilizers below the question) and specify which crops they were applied to (using the crop code from the codebook). If crops are intercropped, list both. List up to 4 crops.
3. Ask whether the household purchased any other inputs to apply, including pesticides, herbicides, fungicides, etc.
4. Ask to include veterinary medicines, as well as artificial insemination, animal feed, mineral licks and other inputs specifically for farm animals.
5. Credit may have come from government offices, NGOs, or other formal institutions, e.g. banks, cooperatives, projects, micro-finance, registered groups (where a loanee commits to repay by signing), or informal sources (money lenders, unregistered groups or networks, friends, relatives).
6. Crop or livestock insurance may not be known to respondents but this may be very important in the future. This should be phrased locally appropriate, as an investment by the household in a fund that would compensate in case something goes wrong with crop or livestock.

Section VIII: Climate and Weather Information

This question focuses on different types of weather information. Ask row by row:

1. whether farmers have received any information: if “yes”, continue with 2; if “no”, go to the next row. Please prioritize the most important source of information and ask the following questions according to that channel of information.
2. from what source: include channels of information and use the codebook on weather information for answers to this question.
3. who in the household received the information: record whether it was men or women or both.
4. whether it had advice on how to use the information in the farming: probe if necessary. If “yes”, continue with 5; if “no”, go to 5.
5. whether it was useful information and the household changed aspects of farming as a result of this information. Use the codebook on weather information for answers to this question. If “yes”, continue with 6; if “no”, go to the next row. Try to probe in the event that there is no answer. Possibilities include planting early, delaying planting, not using fertilizer, not planting at all, irrigating, water harvesting, etc.
6. What aspects of farming were changed: use the codebook.
- Regarding the types of information in the rows:
 - Forecasts of extreme events and of pest/disease outbreaks: what type of extreme events depends on the local context and the question should be phrased accordingly. This can include forecasts that are made about El Nino or La Nina (ENSO) events.
 - Forecast of the start of the rains: these predictions may give information on when the rains will start. Be clear whether farmers are getting this information several months ahead of time and use this information to plan their farming activities. These forecasts are not commonly available yet, but it is hoped that they will be available in the future.

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- Forecasts of weather for the short-term (2-3 days): this information would be useful for the farmer in the short-term and trigger short-term adjustments
- Forecasts of weather for the long-term (2-3 months): this information would be useful for the farmer in the long-term and means planning ahead and changing plans because of forecasts.

Section IX: Community Groups

1. We want to learn about formal or informal community groups and social networks that people belong to that are engaged in activities related to management of land (crop, tree, soil) and water management, agricultural activities and income generation in particular (at the current point in time, not in relation to a climate-related crisis).
2. We are interested in climate-related crisis here (e.g. drought, flood, frost, etc.); these have to be asked in a locally appropriate manner. If the household has faced a crisis, go to 3; if the household did not face a crisis go to Section X.
3. Ask about any help in the crisis. If the household has answered “yes”, go to 3; if the household answered “no” go to Section X.
4. Ask about who provided assistance after the climate-related crisis occurred.
5. Specify what activities helped with your problem.

Section X: Assets

In addition to asking the respondent, also use your own observation and probe if necessary. Each site should produce short notes about definitions of some of the assets listed below, e.g. improved housing will take a different form at each site, please apply locally appropriate definitions.

1. This question refers to tangible assets only. Record the assets that are mentioned to you without worrying in which condition the asset is. The list of assets can be expanded to include locally relevant assets; also define the ones listed in a locally appropriate manner (e.g. improved stove is any stove that is an improvement to the traditional model, this will be different at each site).
2. As above, apply locally appropriate definition of e.g. improved housing.

Ending the Interview

After completing the last question in the questionnaire, please remember to thank the respondents for their time.

Give each respondent the opportunity to add anything, make clarifications, or make either specific or general comments on the study issues.

Each enumerator is also asked to take a few minutes to make notes about the interview. This can include any observations, concerns or comments you have and may also include your interpretations/qualifications about specific issues/concerns during the interview. Make note of anything that went differently than planned. Include respondent/household characteristics or dynamics between household members (e.g. disagreements on certain issues) that you would like to highlight. E.g. women may not answer specifically about land size or assets and the enumerator should be noting this.

Also, record any challenges and unforeseen issues that you faced with the questionnaire itself.

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Expectations: respondents may have expectations and ask about the next steps. Please avoid talking about climate change and explain that the survey aims to gain an improved understanding of the current issues that households face in this region. The results of this survey will be used as basis to make decisions about future involvement.

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Audit trail - log

Each team will keep an audit trail of their activities. This includes all the activities that are carried out from the testing and discussions on the applicability of the questionnaire in your country, the training of the enumerators, etc. Once the data are available this includes information on the quality control process, oddities found in the data with the actions taken, and also the steps taken to analyze the data and to write the report.

This could be on Excel sheets with the following structure:

Date	Time taken (if applicable)	Activity	Comments

Electronic files for the baseline

The questionnaire is delivered as a Word file. Each team will need to translated the questions, but not necessarily the instructions or the codebook, into the language of the respondent. A new file should be produced and name using the same name as the version in English but changing "English" for the name of the language.

The codebook will also be distributed in electronic form. The team will need to adapt it so that the codes are relevant to the site. A copy of the file, with the name of the language changed should be sent to the CCAFS central team.

A set of files that make up the data entry system (developed in CSPRO) will be distributed to each team for data entry. Instructions on how to set up the data entry operation will be distributed with the files.

CSPRO

CSPRO is data entry software produced by the US Census Bureau. It permits the data entry screens to resemble the questionnaire forms and also includes checks on the data being entered. It also permits the questionnaire to be transferred to a hand-held computer (pda) for data collection in the field.

CS-Pro can be downloaded from the web, but a copy has also been provided for those with slow internet access. For the data entry operators we suggest that the full CS-Pro be installed and the full application also be supplied.

A set of 16 videos has been provided that shows how to use CSPRO. You do not need to go through these videos to be able to use the data entry system, but you may want to look at them to learn more about CSPRO. Support on setting up the data entry system will be available from the CCAFS central team.

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Training videos available for CS-PRO

Video	Title	Comment
1	Explaining the questionnaire	Useful introduction
2	Creating the data dictionary	Only needed if changes made
3	Creating value sets for labels and ranges	Only needed if changes made
4	Setting missing value codes	Only needed if changes made
5	Forms for data entry	Only needed if changes made
6	Data entry forms continued	Only needed if changes made
7	Formatting the roster	Only needed if changes made
8	Testing the system	Only needed if changes made
9	Adding skips and checks	Only needed if changes made
10	Double data entry	Useful
11	Backing up the system	Useful
12	Concatenating data files	Useful
13	Frequency tables	Useful
14	Exporting data for analysis	Useful
15	Preparing CS-Pro for the PDA	Only needed if changes made
16	Using CS-Pro mobile	Useful